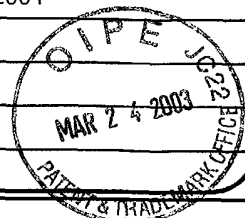


Please type a plus sign (+) inside this box → ☐

PTO/SB/21 (6-98)
Approved for use through 09/30/2000. OMB 0651-0031
Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	10/038,895
	Filing Date	December 24, 2001
	First Named Inventor	Kulp et al.
	Group Art Unit	1623
	Examiner Name	Unknown
Total Number of Pages in This Submission	Attorney Docket Number	3379.1



ENCLOSURES (check all that apply)		
<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Response <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers 3/19/03 Dear Sir/ Madam: The circled serial number is incorrect and the correct number has been typed in. An original filing of the attached was mailed today 3/19/03. Please accept this copy with the correct serial number. If you have any questions, please contact me at 408/731-5886. Thank you. Sylvia Rogers Patent Assistant	<input type="checkbox"/> After Allowance Communication to Communication to Board of and Interferences Communication to Group (Notice, Brief, Reply Brief) any Information Letter 1st Enclosure(s) (identify below): turn Receipt Postcard; transmittal for Substitute quence Listing & Preliminary endment; Diskette; quence Listing, 27 pp; rt 2, Copy of Notice to mply.

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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT	
Firm or Individual name	Leticia R. Block, Reg. No.: 50,167
Signature	Leticia R. Block
Date	03-18-2003

CERTIFICATE OF MAILING			
I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Washington, D.C. 20231 on this date: 3/19/03			
Typed or printed name	Sylvia Rogers		
Signature		Date	3/19/03

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PATENT
Atty. Docket No. 3379.1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kulp et. al.

Examiner: Unknown

Serial No: 10/038,895

Group Art Unit: 1623

Filing Date: October 24, 2001

Title: NUCLEIC ACIDS ENCODING
G PROTEINS COUPLED RECEPTORS

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TRANSMITTAL OF SUBSTITUTE SEQUENCE LISTING AND PRELIMINARY
AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Sir:

This Substitute Sequence Listing is submitted in response to the Notice to Comply with Sequence Requirements mailed on March 10, 2003.

Transmitted herewith is a copy of a Substitute "Sequence Listing" (27 sheets) in paper form for the above-identified patent application as required by 37 C.F.R. 1.825(a) and 1.821(c). A copy of the "Sequence Listing" in computer readable form as required by 37 C.F.R. 1.825(b) and 1.821(e) is enclosed herewith.

As required by 37 C.F.R. 1.825(b), Applicant's representative hereby states that the content of the "Sequence Listing" in paper form and the computer readable form of the "Sequence Listing" are the same and, as required by 37 C.F.R. 1.825(a), also states that the submission includes no new matter.

Please amend the above-identified application as follows:

In the Specification:

Please replace the "Sequence Listing" filed on February 19, 2003 with the attached Substitute "Sequence Listing" comprising SEQ ID NOs: 1-20.

REMARKS

The "organism" in SEQ ID NO: 1 has been renamed from "synthetic" to "artificial sequence" in order to comply with the rules.

Applicants believe that no fee is required. However if a fee is required, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account 01-0431.

Dated: 03-18-03

Respectfully submitted,

Leticia R. Block

Leticia R. Block
Reg. No. 50,167

Affymetrix, Inc.
3380 Central Expressway
Santa Clara, CA 95051
Tel: 408-731-5000
Fax: 408-731-5392



3379.1.ST25.txt
SEQUENCE LISTING

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<110> Kulp, David C.
Siani-Rose, Michael A.
Williams, Alan J.
Harmon, Cyrus L.

<120> Nucleic Acids Encoding G Proteins Coupled Receptors

<130> 3379.1

<140> 10/038,895

<141> 2001-10-24

<150> US 60/244,082

<151> 2000-10-26

<160> 20

<170> PatentIn version 3.2

<210> 1

<211> 274

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<213> Artificial Sequence

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35 40 45

Met Tyr Thr Val Gly Tyr Ser Ser Ser Leu Val Met Leu Leu Val Ala
50 55 60

Leu Gly Ile Leu Cys Ala Phe Arg Arg Leu His Cys Thr Arg Asn Tyr
65 70 75 80

Ile His Met His Leu Phe Val Ser Phe Ile Leu Arg Ala Leu Ser Asn
Page 1

Phe Ile Lys Asp Ala Val Leu Phe Ser Ser Asp Asp Val Thr Tyr Cys
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145 150 155 160
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195 200 205
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Lys Leu Arg Thr Gln Glu Thr Arg Gly Asn Glu Val Ser His Tyr Lys
225 230 235 240
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Page 2

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Glu Gly Cys Ser His Val His Ser Asn Gly Ser Tyr Thr Lys Cys Lys
35 40 45

Cys Phe His Leu Ser Ser Phe Ala Val Leu Val Ala Leu Ala Pro Lys
50 55 60

Asp Pro Val Leu Thr Val Ile Thr Gln Val Gly Leu Thr Ile Ser Leu
65 70 75 80

Leu Cys Leu Phe Leu Ala Ile Leu Thr Phe Leu Leu Cys Arg Pro Ile
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Gln Asn Thr Ser Thr Ser Leu His Leu Glu Leu Ser Leu Cys Leu Phe
100 105 110

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Leu Ala His Leu Leu Phe Leu Thr Gly Ile Asn Arg Thr Glu Pro Glu
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Leu Cys Ser Ile Ile Ala Gly Leu Leu His Phe Leu Tyr Leu Ala Cys
130 135 140

Phe Thr Trp Met Leu Leu Glu Gly Leu His Leu Phe Leu Thr Val Arg
145 150 155 160

Asn Leu Lys Val Ala Asn Tyr Thr Ser Thr Gly Arg Phe Lys Lys Arg
165 170 175

Phe Met Tyr Pro Val Gly Tyr Gly Ile Pro Ala Val Ile Ile Ala Val
180 185 190

Ser Ala Ile Val Gly Pro Gln Asn Tyr Gly Thr Phe Thr His Cys Trp
195 200 205

Leu Lys Leu Asp Lys Gly Phe Ile Trp Ser Phe Met Gly Pro Val Ala
210 215 220

Val Ile Ile Leu Asn Leu Val Phe Tyr Phe Gln Val Leu Trp Ile Leu
225 230 235 240

Arg Ser Lys Leu Ser Ser Leu Asn Lys Glu Val Ser Thr Ile Gln Asp
245 250 255

Thr Arg Val Met Thr Phe Lys Ala Ile Ser Gln Leu Phe Ile Leu Gly
260 265 270

Cys Ser Trp Gly Leu Gly Phe Phe Met Val Glu Glu Val Gly Lys Thr
275 280 285

Ile Gly Ser Ile Ile Ala Tyr Ser Phe Thr Ile Ile Asn Thr Leu Gln
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Phe Cys Phe Phe Arg Gly Leu Gln Ser Asp Arg Asn Thr Ile His Lys
35 40 45

Asn Leu Cys Ile Ser Leu Phe Val Ala Glu Leu Leu Phe Leu Ile Gly
50 55 60

Ile Asn Arg Thr Asp Gln Pro Ala Cys Ala Val Phe Ala Ala Leu Leu
65 70 75 80

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His Phe Phe Phe Leu Ala Ala Phe Thr Trp Met Phe Leu Glu Gly Val
85 90 95

Gln Leu Tyr Ile Met Leu Val Glu Val Phe Glu Ser Glu His Ser Arg
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Arg Lys Tyr Phe Tyr Leu Val Gly Tyr Gly Met Pro Ala Leu Ile Val
115 120 125

Ala Val Ser Ala Ala Val Asp Tyr Arg Ser Tyr Gly Thr Asp Lys Val
130 135 140

Cys Trp Leu Arg Leu Asp Thr Tyr Phe Ile Trp Ser Phe Ile Gly Pro
145 150 155 160

Ala Thr Leu Ile Ile Met Asn Val Ile Phe Leu Gly Ile Ala Leu Tyr
165 170 175

Lys Met Phe His His Thr Ala Ile Leu Lys Pro Glu Ser Gly Cys Leu
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35 40 45

Ser Ser Asn Pro Pro Thr Leu Tyr Glu Leu Glu Lys Ile Thr Phe Thr
50 55 60

Leu Ser His Arg Lys Thr Asp Arg Tyr Arg Ser Leu Cys Ala Phe Trp
65 70 75 80

Asn Tyr Ser Pro Asp Thr Met Asn Gly Ser Trp Ser Ser Glu Gly Cys
85 90 95

Glu Leu Thr Tyr Ser Asn Glu Thr His Thr Ser Cys Arg Cys Asn His
100 105 110

Leu Thr His Phe Ala Ile Leu Met Ser Ser Gly Pro Ser Ile Ile Lys
115 120 125

Asp Tyr Asn Ile Leu Thr Arg Ile Thr Gln Leu Gly Ile Ile Ile Ser
130 135 140

Leu Ile Cys Leu Ala Ile Cys Ile Phe Thr Phe Trp Phe Phe Ser Glu
145 150 155 160

Ile Gln Ser Thr Arg Thr Thr Ile His Lys Asn Leu Cys Cys Ser Leu
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Phe Leu Ala Glu Leu Val Phe Leu Val Gly Ile Asn Thr Asn Thr Asn
180 185 190

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Lys Phe Cys Ser Ile Ile Ala Gly Leu Leu His Tyr Phe Phe Leu Ala
195 200 205

Ala Phe Ala Trp Met Cys Ile Glu Gly Ile His Leu Tyr Leu Ile Val
210 215 220

Val Gly Val Ile Tyr Asn Lys Gly Phe Leu His Lys Asn Phe Tyr Ile
225 230 235 240

Phe Gly Tyr Leu Ser Pro Ala Val Val Val Gly Phe Ser Ala Ala Leu
245 250 255

Gly Tyr Arg Tyr Tyr Gly Thr Thr Lys Val Cys Trp Leu Ser Thr Glu
260 265 270

Asn Asn Phe Ile Trp Ser Phe Ile Gly Pro Ala Cys Leu Ile Ile Leu
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35 40 45

Leu Ser Phe Val Gly Cys Gly Val Ser Phe Cys Ala Leu Thr Thr Thr
50 55 60

Phe Leu Leu Phe Leu Val Ala Gly Val Pro Lys Ser Glu Arg Thr Thr
65 70 75 80

Val His Lys Asn Leu Thr Phe Ser Leu Ala Ser Ala Glu Gly Phe Leu
85 90 95

Met Thr Ser Glu Trp Ala Lys Ala Asn Glu Ala Cys Val Ala Val Thr
100 105 110

Val Ala Met His Phe Leu Phe Leu Val Ala Phe Ser Trp Met Leu Val
115 120 125

Glu Gly Leu Leu Leu Trp Arg Lys Val Val Ala Val Ser Met His Pro
130 135 140

Gly Pro Gly Met Arg Leu Tyr His Ala Thr Gly Trp Gly Val Pro Val
145 150 155 160

Gly Ile Val Ala Val Thr Leu Ala Met Leu Pro His Asp Tyr Val Ala
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Pro Gly His Cys Trp Leu Asn Val His Thr Asn Ala Ile Trp Ala Phe
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Pro Leu Leu His Glu His Glu Pro Ala Gly Glu Glu Ala Leu Arg Gln
35 40 45

Lys Arg Ala Val Ala Thr Lys Ser Pro Thr Ala Glu Glu Tyr Thr Val
50 55 60

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 85 90 95
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 100 105 110
 Ala Gly Asn Glu Ile Trp Cys Ser Cys Glu Thr Gly Tyr Gly Trp Pro
 115 120 125
 Arg Glu Arg Cys Leu His Asn Leu Ile Cys Gln Glu Arg Asp Val Phe
 130 135 140
 Leu Pro Gly His His Cys Ser Cys Leu Lys Glu Leu Pro Pro Asn Gly
 145 150 155 160
 Pro Phe Cys Leu Leu Gln Glu Asp Val Thr Leu Asn Met Arg Val Arg
 165 170 175
 Leu Asn Val Gly Phe Gln Glu Asp Leu Met Asn Thr Ser Ser Ala Leu
 180 185 190
 Tyr Arg Ser Tyr Lys Thr Asp Leu Glu Thr Ala Arg Lys Gly Tyr Gly
 195 200 205
 Ile Leu Pro Gly Phe Lys Gly Val Thr Val Thr Gly Phe Lys Ser Gly
 210 215 220
 Ser Val Val Val Thr Tyr Glu Val Lys Thr Thr Pro Pro Ser Leu Glu
 225 230 235 240
 Leu Ile His Lys Ala Asn Glu Gln Val Val Gln Ser Leu Asn Gln Thr
 245 250 255
 Tyr Lys Met Asp Tyr Asn Ser Phe Gln Ala Val Thr Ile Asn Glu Ser
 260 265 270
 Asn Phe Phe Val Thr Pro Glu Ile Ile Phe Glu Gly Asp Thr Val Ser
 275 280 285
 Leu Val Cys Glu Lys Glu Val Leu Ser Ser Asn Val Ser Trp Arg Tyr
 290 295 300
 Glu Glu Gln Gln Leu Glu Ile Gln Asn Ser Ser Arg Phe Ser Ile Tyr
 305 310 315 320

3379.1.ST25.txt

Thr Ala Leu Phe Asn Asn Met Thr Ser Val Ser Lys Leu Thr Ile His
325 330 335

Asn Ile Thr Pro Gly Asp Ala Gly Glu Tyr Val Cys Lys Leu Ile Leu
340 345 350

Asp Ile Phe Glu Tyr Glu Cys Lys Lys Lys Ile Asp Val Met Pro Ile
355 360 365

Gln Ile Leu Ala Asn Glu Glu Met Lys Val Met Cys Asp Asn Asn Pro
370 375 380

Val Ser Leu Asn Cys Cys Ser Gln Gly Asn Val Asn Trp Ser Lys Val
385 390 395 400

Glu Trp Lys Gln Glu Gly Lys Ile Asn Ile Pro Gly Thr Pro Glu Thr
405 410 415

Asp Ile Asp Ser Ser Cys Ser Arg Tyr Thr Leu Lys Ala Asp Gly Thr
420 425 430

Gln Cys Pro Ser Gly Ser Ser Gly Thr Thr Val Ile Tyr Thr Cys Glu
435 440 445

Phe Ile Ser Ala Tyr Gly Ala Arg Gly Ser Ala Asn Ile Lys Val Thr
450 455 460

Phe Ile Ser Val Ala Asn Leu Thr Ile Thr Pro Asp Pro Ile Ser Val
465 470 475 480

Ser Glu Gly Gln Asn Phe Ser Ile Lys Cys Ile Ser Asp Val Ser Asn
485 490 495

Tyr Asp Glu Val Tyr Trp Asn Thr Ser Ala Gly Ile Lys Ile Tyr Gln
500 505 510

Arg Phe Tyr Thr Thr Arg Arg Tyr Leu Asp Gly Ala Glu Ser Val Leu
515 520 525

Thr Val Lys Thr Ser Thr Arg Glu Trp Asn Gly Thr Tyr His Cys Ile
530 535 540

Phe Arg Tyr Lys Asn Ser Tyr Ser Ile Ala Thr Lys Asp Val Ile Val
545 550 555 560

His Pro Leu Pro Leu Lys Leu Asn Ile Met Val Asp Pro Leu Glu Ala

Thr Val Ser Cys Ser Gly Ser His His Ile Lys Cys Cys Ile Glu Glu
 580 585 590
 Asp Gly Asp Tyr Lys Val Thr Phe His Thr Gly Ser Ser Ser Leu Pro
 595 600 605
 Ala Ala Lys Glu Val Asn Lys Lys Gln Val Cys Tyr Lys His Asn Phe
 610 615 620
 Asn Ala Ser Ser Val Ser Trp Cys Ser Lys Thr Val Asp Val Cys Cys
 625 630 635 640
 His Phe Thr Asn Ala Ala Asn Asn Ser Val Trp Ser Pro Ser Met Lys
 645 650 655
 Leu Asn Leu Val Pro Gly Glu Asn Ile Thr Cys Gln Asp Pro Val Ile
 660 665 670
 Gly Val Gly Glu Pro Gly Lys Val Ile Gln Lys Leu Cys Arg Phe Ser
 675 680 685
 Asn Val Pro Ser Ser Pro Glu Ser Pro Ile Gly Gly Thr Ile Thr Tyr
 690 695 700
 Lys Cys Val Gly Ser Gln Trp Glu Glu Lys Arg Asn Asp Cys Ile Ser
 705 710 715 720
 Ala Pro Ile Asn Ser Leu Leu Gln Met Ala Lys Leu Ile Lys Ser Pro
 725 730 735
 Ser Gln Asp Glu Met Leu Pro Thr Tyr Leu Lys Asp Leu Ser Ile Ser
 740 745 750
 Ile Asp Lys Ala Glu His Glu Ile Ser Ser Ser Pro Gly Ser Leu Gly
 755 760 765
 Ala Ile Ile Asn Ile Leu Asp Leu Leu Ser Thr Val Pro Thr Gln Val
 770 775 780
 Asn Ser Glu Met Met Thr Val Leu Ser Thr Val Asn Val Ile Leu Gly
 785 790 795 800
 Lys Pro Val Leu Asn Thr Trp Lys Val Leu Gln Gln Gln Trp Thr Asn
 805 810 815

3379.1.ST25.txt

Gln Ser Ser Gln Leu Leu His Ser Val Glu Arg Phe Ser Gln Ala Leu
 820 825 830
 Gln Ser Gly Asp Ser Pro Pro Leu Ser Phe Ser Gln Thr Asn Val Gln
 835 840 845
 Met Ser Ser Met Val Ile Lys Ser Ser His Pro Glu Thr Tyr Gln Gln
 850 855 860
 Arg Phe Val Phe Pro Tyr Phe Asp Leu Trp Gly Asn Val Val Ile Asp
 865 870 875 880
 Lys Ser Tyr Leu Glu Asn Leu Gln Ser Asp Ser Ser Ile Val Thr Met
 885 890 895
 Ala Phe Pro Thr Leu Gln Ala Ile Leu Ala Gln Asp Ile Gln Glu Asn
 900 905 910
 Asn Phe Ala Glu Ser Leu Val Met Thr Thr Thr Val Ser His Asn Thr
 915 920 925
 Thr Met Pro Phe Arg Ile Ser Met Thr Phe Lys Asn Asn Ser Pro Ser
 930 935 940
 Gly Gly Glu Thr Lys Cys Val Phe Trp Asn Phe Arg Leu Ala Asn Asn
 945 950 955 960
 Thr Gly Gly Trp Asp Ser Ser Gly Cys Tyr Val Glu Glu Gly Asp Gly
 965 970 975
 Asp Asn Val Thr Cys Ile Cys Asp His Leu Thr Ser Phe Ser Ile Leu
 980 985 990
 Met Ser Pro Asp Ser Pro Asp Pro Ser Ser Leu Leu Gly Ile Leu Leu
 995 1000 1005
 Asp Ile Ile Ser Tyr Val Gly Val Gly Phe Ser Ile Leu Ser Leu
 1010 1015 1020
 Ala Ala Cys Leu Val Val Glu Ala Val Val Trp Lys Ser Val Thr
 1025 1030 1035
 Lys Asn Arg Thr Ser Tyr Met Arg His Thr Cys Ile Val Asn Ile
 1040 1045 1050
 Ala Ala Ser Leu Leu Val Ala Asn Thr Trp Phe Ile Val Val Ala
 1055 1060 1065

3379.1.ST25.txt

Ala Ile Gln Asp Asn Arg Tyr Ile Leu Cys Lys Thr Ala Cys Val
1070 1075 1080

Ala Ala Thr Phe Phe Ile His Phe Phe Tyr Leu Ser Val Phe Phe
1085 1090 1095

Trp Met Leu Thr Leu Gly Leu Met Leu Phe Tyr Arg Leu Val Phe
1100 1105 1110

Ile Leu His Glu Thr Ser Arg Ser Thr Gln Lys Ala Ile Ala Phe
1115 1120 1125

Cys Leu Gly Tyr Gly Cys Pro Leu Ala Ile Ser Val Ile Thr Leu
1130 1135 1140

Gly Ala Thr Gln Pro Arg Glu Val Tyr Thr Arg Lys Asn Val Cys
1145 1150 1155

Trp Leu Asn Trp Glu Asp Thr Lys Ala Leu Leu Ala Phe Ala Ile
1160 1165 1170

Pro Ala Leu Ile Ile Val Val Val Asn Ile Thr Ile Thr Ile Val
1175 1180 1185

Val Ile Thr Lys Ile Leu Arg Pro Ser Ile Gly Asp Lys Pro Cys
1190 1195 1200

Lys Gln Glu Lys Ser Ser Leu Phe Gln Ile Ser Lys Ser Ile Gly
1205 1210 1215

Val Leu Thr Pro Leu Leu Gly Leu Thr Trp Gly Phe Gly Leu Thr
1220 1225 1230

Thr Val Phe Pro Gly Thr Asn Leu Val Phe His Ile Ile Phe Ala
1235 1240 1245

Ile Leu Asn Val Phe Gln Leu Phe Ile Leu Leu Phe Gly Cys Leu
1250 1255 1260

Trp Asp Leu Lys Gln Glu Ala Leu Leu Asn Lys Phe Ser Leu Ser
1265 1270 1275

Arg Trp Ser Ser Gln His Ser Lys Thr Ser Leu Gly Ser Ser Thr
1280 1285 1290

Pro Val Phe Ser Met Ser Ser Pro Ile Ser Arg Arg Phe Asn Asn
1295 1300 1305

3379.1.ST25.txt

Leu Phe Gly Lys Thr Gly Thr Tyr Asn Val Ser Thr Pro Glu Ala
1310 1315 1320

Thr Ser Ser Ser Leu Glu Asn Ser Ser Ser Ala Ser Ser Leu Leu
1325 1330 1335

Asn

<210> 14
<211> 4038
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Organism

<400> 14
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gctgcactga actggaatta cgagtctact attcatcctt tgagtcttca tgaacatgaa 120
ccagctggtg aagaggcact gaggcaaaaa cgagccgttg ccacaaaaag tcctacggct 180
gaagaataca ctgttaatat tgagatcagt ttgaaaatg catccttcct ggatcctatc 240
aaagcctact tgaacagcct cagttttcca attcatggga ataacactga ccaaattacc 300
gacattttga gcataaatgt gacaacagtc tgcagacctg ctggaaatga aatctggtgc 360
tcctgcgaga caggttatgg gtggcctcgg gaaagggtgc ttcacaatct catttgtcaa 420
gagcgtgacg tcttctctcc agggcaccat tgcagttgcc ttaaagaact gcctcccaat 480
ggaccttttt gcctgcttca ggaagatgtt accctgaaca tgagagtcag actaaatgta 540
ggctttcaag aagacctcat gaacacttcc tccgccctct ataggtccta caagaccgac 600
ttggaaacag cgttccggaa gggttacgga attttaccag gcttcaaggg cgtgactgtg 660
acagggttca agtctggaag tgtggttgtg acatatgaag tcaagactac accaccatca 720
cttgagttaa tacataaagc caatgaacaa gttgtacaga gcctcaatca gacctacaaa 780
atggactaca actcctttca agcagttact atcaatgaaa gcaatttctt tgtcacacca 840
gaaatcatct ttgaagggga cacagtcagt ctggtgtgtg aaaaggaagt ttgtcctcc 900
aatgtgtctt ggcgctatga agaacagcag ttggaaatcc agaacagcag cagattctcg 960
atttacaccg cacttttcaa caacatgact tcggtgtcca agctcaccat ccacaacatc 1020
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tgcaagaaga aaatagatgt tatgcccatac caaattttgg caaatgaaga aatgaagggtg 1140
atgtgcgaca acaatcctgt atctttgaac tgctgcagtc agggtaatgt taattggagc 1200

3379.1.ST25.txt

aaagtagaat ggaagcagga aggaaaaata aatattccag gaaccctga gacagacata	1260
gattctagct gcagcagata caccctcaag gctgatggaa cccagtgcc aagcgggtcg	1320
tctggaacaa cagtcattcta cacttgtagag ttcatcagtg cctatggagc cagaggcagt	1380
gcaaacataa aagtgcatt catctctgtg gccaatctaa caataacccc ggaccaatt	1440
tctgtttctg agggacaaaa cttttctata aaatgcatca gtgatgtgag taactatgat	1500
gagggtttatt ggaacacttc tgctggaatt aaaatatacc aaagatttta taccacgagg	1560
aggtatcttg atggagcaga atcagtactg acagtcaaga cctcgaccag ggagtggaat	1620
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tgctacaaac acaatttcaa tgcaagctca gtttcctggg gttcaaaaac tgttgatgtg	1920
tgttgctact ttaccaatgc tgctaataat tcagtctgga gccatctat gaagctgaat	1980
ctggttcctg gggaaaacat cacatgccag gatcccgtaa taggtgtcgg agagccgggg	2040
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atctctgccc caataaacag tctgctccag atggctaagg ctttgatcaa gagccctct	2220
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acttttaaga acaatagccc ttcaggcggc gaaacgaagt gtgtcttctg gaacttcagg	2880
cttgccaaca acacaggggg gtgggacagc agtgggtgct atgtagaaga aggtgatggg	2940
gacaatgtca cctgtatctg tgaccaccta acatcattct ccatcctcat gtcccctgac	3000
tcccagatc ctagttctct cctgggaata ctctgggata ttatttctta tgttggggtg	3060
ggcttttcca tcttgagctt ggcagcctgt ctagttgtgg aagctgtggg gtggaaatcg	3120

3379.1.ST25.txt

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gtgaccaaga accggacttc ttatatgcmc cacacctgca tagtgaatat cgctgcctcc 3180
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ctctgcaaga cagcctgtgt ggctgccacc ttcttcatcc acttcttcta cctcagcgtc 3300
ttcttctgga tgctgacact gggcctcatg ctgttctatc gcctgggtttt cattctgcat 3360
gaaacaagca ggtccactca gaaagccatt gccttctgtc ttggctatgg ctgcccactt 3420
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gcttcttcgt tgctcaac 4038

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<210> 15
 <211> 460
 <212> PRT
 <213> Artificial Sequence

<220>
 <223> Synthetic Organism

<400> 15

Ile Leu Asn Ser Lys Ser Ile Ser Asn Trp Thr Phe Ile Arg Asp Arg
 1 5 10 15

Asn Ser Ser Tyr Ile Leu Leu His Ser Val Asn Ser Phe Ala Arg Arg
 20 25 30

Leu Phe Ile Asp Asn Ile Pro Val Asp Ile Ser Asp Val Phe Ile His
 35 40 45

Thr Met Gly Thr Thr Ile Ser Gly Asp Asn Ile Gly Lys Asn Phe Thr
 50 55 60

Phe Ser Met Arg Ile Asn Asp Thr Ser Asn Glu Val Thr Gly Arg Val
 65 70 75 80

3379.1.ST25.txt

Leu Ile Ser Arg Asp Glu Leu Arg Lys Val Pro Ser Pro Ser Gln Val
 85 90 95
 Ile Ser Ile Ala Phe Pro Thr Ile Gly Ala Ile Leu Glu Ala Ser Leu
 100 105 110
 Leu Glu Asn Val Thr Val Asn Gly Leu Val Leu Ser Ala Ile Leu Pro
 115 120 125
 Lys Glu Leu Lys Arg Ile Ser Leu Ile Phe Glu Lys Ile Ser Lys Ser
 130 135 140
 Glu Glu Arg Arg Thr Gln Cys Val Gly Trp His Ser Val Glu Asn Arg
 145 150 155 160
 Trp Asp Gln Gln Ala Cys Lys Met Ile Gln Glu Asn Ser Gln Gln Ala
 165 170 175
 Val Cys Lys Cys Arg Pro Ser Lys Leu Phe Thr Ser Phe Ser Ile Leu
 180 185 190
 Met Ser Pro His Ile Leu Glu Ser Leu Ile Leu Thr Tyr Ile Thr Tyr
 195 200 205
 Val Gly Leu Gly Ile Ser Ile Cys Ser Leu Ile Leu Cys Leu Ser Ile
 210 215 220
 Glu Val Leu Val Trp Ser Gln Val Thr Lys Thr Glu Ile Thr Tyr Leu
 225 230 235 240
 Arg His Val Cys Ile Val Asn Ile Ala Ala Thr Leu Leu Met Ala Asp
 245 250 255
 Val Trp Phe Ile Val Ala Ser Phe Leu Ser Gly Pro Ile Thr His His
 260 265 270
 Lys Gly Cys Val Ala Ala Thr Phe Phe Val His Phe Phe Tyr Leu Ser
 275 280 285
 Val Phe Phe Trp Met Leu Ala Lys Ala Leu Leu Ile Leu Tyr Gly Ile
 290 295 300
 Met Ile Val Phe His Thr Leu Pro Lys Ser Val Leu Val Ala Ser Leu
 305 310 315 320
 Phe Ser Val Gly Tyr Gly Cys Pro Leu Ala Ile Ala Ala Ile Thr Val
 325 330 335

3379.1.ST25.txt

Ala Ala Thr Glu Pro Gly Lys Gly Tyr Leu Arg Pro Glu Ile Cys Trp
340 345 350

Leu Asn Trp Asp Met Thr Lys Ala Leu Leu Ala Phe Val Ile Pro Ala
355 360 365

Leu Ala Ile Val Val Val Asn Leu Ile Thr Val Thr Leu Val Ile Val
370 375 380

Lys Thr Gln Arg Ala Ala Ile Gly Asn Ser Met Phe Gln Glu Val Arg
385 390 395 400

Ala Ile Val Arg Ile Ser Lys Asn Ile Ala Ile Leu Thr Pro Leu Leu
405 410 415

Gly Leu Thr Trp Gly Phe Gly Val Ala Thr Val Ile Asp Asp Arg Ser
420 425 430

Leu Ala Phe His Ile Ile Phe Ser Leu Leu Asn Ala Phe Gln Phe Phe
435 440 445

Ile Leu Val Phe Gly Thr Ile Leu Asp Pro Lys Val
450 455 460

<210> 16
<211> 1383
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Organism

<400> 16
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gacatatcag atgtcttcat tcatactatg ggcaccacca tatctggaga taacattgga 180
aaaaatttca ctttttctat gagaattaat gacaccagca atgaagtcac tgggagagtg 240
ttgatcagca gagatgaact tcggaagggtg cttccctt ctcaggctcat cagcattgca 300
tttccaacta ttggggctat tttggaagcc agtcttttg aaatgttac tgtaaattggg 360
cttgtcctgt ctgccatttt gcccaaggaa cttaaaagaa tctcactgat ttttgaaaag 420
atcagcaagt cagaggagag gaggacacag tgtgttggct ggcactctgt ggagaacaga 480
tgggaccagc aggcctgcaa aatgattcaa gaaaactccc agcaagctgt ttgcaaattgt 540
aggccaagca aattgtttac ctctttctca attcttatgt cacctcacat cttagagagt 600

3379.1.ST25.txt

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cgccatgtgt gcattgttaa cattgcagcc actttgctga tggcagatgt gtggttcatt 780
gtggcttcct ttcttagtgg cccaataaca caccacaagg gatgtgtggc agccacattt 840
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cctggcaaag gctatctacg acctgagatc tgctggctca actgggacat gaccaaagcc 1080
ctcctggcct tcgtgatccc agctttggcc atcgtggtag taaacctgat cacagtcaca 1140
ctgggtgattg tcaagacca gcgagctgcc attggcaatt ccatgttcca ggaagtgaga 1200
gccattgtga gaatcagcaa gaacatcgcc atcctcacac cacttctggg actgacctgg 1260
ggatttggag tagccactgt catcgatgac agatccctgg ccttccacat tatcttctcc 1320
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gta 1383

<210> 17
<211> 299
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Organism

<400> 17

Gly Thr Thr Gly Asp Trp Ser Ser Glu Gly Cys Ser Thr Glu Val Arg
1 5 10 15

Pro Glu Gly Thr Val Cys Cys Cys Asp His Leu Thr Phe Phe Ala Leu
20 25 30

Leu Leu Pro Thr Leu Asp Gln Ser Thr Val His Ile Leu Thr Arg Ile
35 40 45

Ser Gln Ala Gly Cys Gly Val Ser Met Ile Phe Leu Ala Phe Thr Ile
50 55 60

Ile Leu Tyr Ala Phe Leu Arg Leu Ser Arg Glu Arg Phe Lys Ser Glu
65 70 75 80

Asp Ala Pro Lys Ile His Val Ala Leu Gly Gly Ser Leu Phe Leu Leu
85 90 95

3379.1.ST25.txt

Asn Leu Ala Phe Leu Val Asn Val Gly Ser Gly Ser Lys Gly Ser Asp
100 105 110

Ala Ala Cys Trp Ala Arg Gly Ala Val Phe His Tyr Phe Leu Leu Cys
115 120 125

Ala Phe Thr Trp Met Gly Leu Glu Ala Phe His Leu Tyr Leu Leu Ala
130 135 140

Val Arg Val Phe Asn Thr Tyr Phe Gly His Tyr Phe Leu Lys Leu Ser
145 150 155 160

Leu Val Gly Trp Gly Leu Pro Ala Leu Met Val Ile Gly Thr Gly Ser
165 170 175

Ala Asn Ser Tyr Gly Leu Tyr Thr Ile Arg Asp Arg Glu Asn Arg Thr
180 185 190

Ser Leu Glu Leu Cys Trp Phe Arg Glu Gly Thr Thr Met Tyr Ala Leu
195 200 205

Tyr Ile Thr Val His Gly Tyr Phe Leu Ile Thr Phe Leu Phe Gly Met
210 215 220

Val Val Leu Ala Leu Val Val Trp Lys Ile Phe Thr Leu Ser Arg Ala
225 230 235 240

Thr Ala Val Lys Glu Arg Gly Lys Asn Arg Lys Lys Val Leu Thr Leu
245 250 255

Leu Gly Leu Ser Ser Leu Val Gly Val Thr Trp Gly Leu Ala Ile Phe
260 265 270

Thr Pro Leu Gly Leu Ser Thr Val Tyr Ile Phe Ala Leu Phe Asn Ser
275 280 285

Leu Gln Val Asp Phe Tyr Ile Leu Ile Phe Tyr
290 295

<210> 18
<211> 900
<212> DNA
<213> Artificial Sequence

<220>
<223> Synthetic Organism

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60

3379.1.ST25.txt

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ctggccttca ccattattct ttatgccttt ctgaggcttt cccgggagag gttcaagtca 240
gaagatgccc caaagatcca cgtggccctg ggtggcagcc tgttcctcct gaatctggcc 300
ttcttggtca atgtggggag tggctcaaag gggctctgatg ctgcctgctg ggcccggggg 360
gctgtcttcc actacttcct gctctgtgcc ttcacctgga tgggccttga agccttcac 420
ctctacctgc tcgctgtcag ggtcttcaac acctacttcg ggcactactt cctgaagctg 480
agcctgggtg gctggggcct gcccgccctg atggtcatcg gcactgggag tgccaacagc 540
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cgtgaaggga caaccatgta cgccctctat atcacctgcc acggctactt cctcatcacc 660
ttcctctttg gcatggtggt cctggccctg gtggctctgga agatcttcac cctgtcccgt 720
gctacagcgg tcaaggagcg ggggaagaac cggaagaagg tgctaccct gctgggcctc 780
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<210> 19
<211> 468
<212> PRT
<213> Artificial Sequence

<220>
<223> Synthetic Organism

<220>
<221> misc_feature
<222> (370)..(370)
<223> xaa can be any naturally occurring amino acid

<400> 19

Asn His Ile Leu Asp Thr Ala Ala Ile Ser Asn Trp Ala Phe Ile Pro
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Asn Lys Asn Ala Ser Ser Asp Leu Leu Gln Ser Val Asn Leu Phe Ala
20 25 30

Arg Gln Leu His Ile His Asn Asn Ser Glu Asn Ile Val Asn Glu Leu
35 40 45

Phe Ile Gln Thr Lys Gly Phe His Ile Asn His Asn Thr Ser Glu Lys
50 55 60

Ser Leu Asn Phe Ser Met Ser Met Asn Asn Thr Thr Glu Asp Ile Leu
65 70 75 80

3379.1.ST25.txt

Gly Met Val Gln Ile Pro Arg Gln Glu Leu Arg Lys Leu Trp Pro Asn
 85 90 95
 Ala Ser Gln Ala Ile Ser Ile Ala Phe Pro Thr Leu Gly Ala Ile Leu
 100 105 110
 Arg Glu Ala His Leu Gln Asn Val Ser Leu Pro Arg Gln Val Asn Gly
 115 120 125
 Leu Val Leu Ser Val Val Leu Pro Glu Arg Leu Gln Glu Ile Ile Leu
 130 135 140
 Thr Phe Glu Lys Ile Asn Lys Thr Arg Asn Ala Arg Ala Gln Cys Val
 145 150 155 160
 Gly Trp His Ser Lys Lys Arg Arg Trp Asp Glu Lys Ala Cys Gln Met
 165 170 175
 Met Leu Asp Ile Arg Asn Glu Val Lys Cys Arg Cys Asn Tyr Thr Ser
 180 185 190
 Val Val Met Ser Phe Ser Ile Leu Met Ser Ser Lys Ser Met Thr Asp
 195 200 205
 Lys Val Leu Asp Tyr Ile Thr Cys Ile Gly Leu Ser Val Ser Ile Leu
 210 215 220
 Ser Leu Val Leu Cys Leu Ile Ile Glu Ala Thr Val Trp Ser Arg Val
 225 230 235 240
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 Page 25

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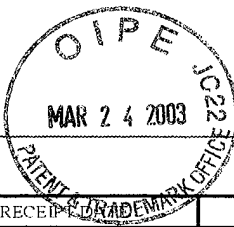
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22886
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SERIAL NO.: 10/038,895 DATE FILED: 10/24/01 DOCKET NO.: 3379
TITLE: Nucleic Acids Encoding G Proteins Coupled Receptors
APPLICANT: Kulp et al. DATE MAILED/HAND DELIVERED: 3/18/03
☐ CERTIFICATE OF MAILING ☐ EXPRESS MAIL LABEL NO.: _____

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